



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,341	02/17/2005	Dieter Voigt	WP-1877-P/US	8950
7590	12/28/2007			
Martin A Farber Suite 473 866 United Nations Plaza New York, NY 10017			EXAMINER WEINSTEIN, LEONARD J	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/500,341

Applicant(s)

VOIGT, DIETER

Examiner

Leonard J. Weinstein

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment of October 9, 2007. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.
2. The examiner acknowledges the amendments to claims 10, 19, and 25.

Claim Objections

3. Claim 10 and therefore by dependency claims 11-30 are objected to because of the following: the recitation in claim 10 of "a second biasing force" in line 13, is best understood by the examiner to mean --- a second biasing means ---. It is noted by the examiner that this interpretation would agree with the limitations of "wherein said second biasing means biases" added by amendment to line 15 of claim 1. It is also noted by the examiner that in the original presentation of "a second biasing force" in claim 10 was not limited to a force transmitted exclusively by a "first biasing means" or a "second biasing means" as claimed. Therefore by amendment the subject matter of "a second biasing force" has been given a different meaning than that of subject matter originally presented. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 10-21, 23, 25, 27, and 29-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Koch et al. US 2002/0088225. Koch teaches all the limitations as claimed for a device for pressure regulation of a hydraulic pump for pumping a hydraulic medium under pressure including: (claim 10) a delivery-quantity regulating means (§ 0030) comprising a piston 104 with a first biasing means 150, a piston member 104 moveable with reciprocating motion (§ 0030) in a first direction, and being biased in said first direction by a first biasing force, via element 129 delivering a hydraulic fluid, of said hydraulic medium acting on a first surface 110 of said piston member 104, a second surface 113 on said piston member 104 being engaged by said first biasing means 150, said piston member 104 being biased by a second biasing means 170, via elements 180, 184, and 188, in a second direction, opposite to said first direction, wherein said second biasing means 170 biases said piston member 104 in addition to said hydraulic medium and said first biasing means 150, thus influencing the pressure of said hydraulic medium (§ 0042); (claim 11) a hydraulic medium provide being lubricating oil (§ 0030), and a hydraulic pump supplies lubricating oil to an internal combustion engine (§ 0002); (claim 12) a first biasing means 150 comprising spring means; (claim 13) a second biasing means 170 comprising magnetic coil means, elements 170A and 170B, and armature means 180 acting onto said piston member 104, via elements 184 in communication with element 188; (claim 14) a second biasing means 170 comprising motor means for adjusting said second biasing force of said first biasing means 150 (§ 0035); (claim 15) a stepping motor provided for a motor means (§ 0035); (claim 16) a first path 129 of hydraulic medium including means, oil pump as recited in the disclosure of Koch, to provide an elevated pressure of hydraulic medium, and a second path 128 of hydraulic medium including means, via a sump

(not shown), to provide a lower pressure of said hydraulic medium as compared with said elevated pressure, and switch means 109 for opening at least one of said paths, elements 128 and 129; (claim 17) a second biasing means 170 comprise electric means, elements 170A and 170B, to be supplied with electric current, the device further comprising means, elements 260 and 298, capable of urging the switch means 120 to open said first path 129 and to provide said elevated pressure (§0073); (claim 18) a biasing means comprising centrifugal valve means 122, drive means, as element 122 is rotated via connecting element 123, for rotating said centrifugal valve means 122 to exert a speed-dependent influence (§0031) onto the pressure of said lubricating oil; (claim 19) a centrifugal valve means 122 comprise a first path 127 for lubricating oil to said first surface 110 of said piston member 104, at least one second path 147 for allowing partial draining of said lubricating oil, switching piston means 120 movable in an at least partially radial direction for alternatively opening one of said first 127 and second 147 paths, and third biasing means 190 for biasing said switching piston means 120 towards said first path 127 (§0037 and 0043); (claim 20) a third biasing means 190 comprising spring means, as shown in figure 1; (claim 21) a switching piston means 120 being positioned inclined to said radial direction, with elements 132 and 138 able to pivot via elements 134 and 140; (claim 23) a switching piston means 120 comprising projection means, elements 132 and 138, extending in said at least partially radial direction, said projection means, elements 132 and 138, being engaged by said third biasing means 190, via elements 136 and 142 in communication with element 114 (§0032); (claim 25) a second biasing means 170, being in communication with element 122 via elements 120, 131, 160, and comprising conveying means, via elements 126, 127, and 147 being put in communication with 117 and 118 during an operation of invention shown in figure 1, for said hydraulic medium for conveying it into a

certain direction, thus altering the pressure of said hydraulic medium; (claim 27) a piston member 104 comprising at least a third surface 112 to be biased by said hydraulic medium in said first direction, and switching means 120 for allowing hydraulic medium to pass to at least one of said first 110 and said at least third 112 surfaces; (claim 29) a housing means, element enclosing elements 104, 131, and 160 being separate however connected to element 102 considered here to be a main housing, for receiving said hydraulic medium in at least one cavity, as defined by bore surround elements 122 and 104, said second biasing means 170 comprising at least one electrical component 170A, which is mounted, within element 102 separate from a main housing as discussed, outside said housing means, main housing, and at least one hydraulic conduit means, as element 188 being operatively connected to element 104 within a cavity, for communication of said cavity, as defined by bore surround elements 122 and 104, and said electrical component 170A; (claim 30) and a housing means, main housing as defined above, for receiving the piston member 104, the second biasing means 170 comprising at least one electrical component 170A attached, via element 102, to said housing means, main housing.

6. Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Barber 5,921,279. Barber teaches all the limitations as claimed for a device for pressure regulation of a hydraulic pump including: (claim 10) a delivery-quantity regulating means 10 comprising a piston unit 16 with a first biasing means 92 a piston member, elements 68, 89, and 90, moveable with reciprocating motion in a first direction, and being biased in said first direction by a first biasing force, via element 74 delivering a hydraulic fluid, of said hydraulic medium acting on a first surface 88 of said piston member, elements 68, 89, and 90, a second surface, section of element 84 in communication with element 86, on said piston member, elements 68, 89, and

90, being engaged by said first biasing means 92, via element 84, said piston member, elements 68, 89, and 90, being biased by a second biasing means 58 in a second direction, opposite to said first direction, wherein said second biasing means 58 biases said piston member, elements 68, 89, and 90, in addition to said hydraulic medium and said first biasing means 92, thus influencing the pressure of said hydraulic medium; (claim 24) and a second biasing means 58 comprising electro-valve means, with elements 60 and 62.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koch et al. US 2002/0088225 A1. Koch discloses the claimed invention including the limitation of a drive means (§0032) comprising shaft means 123 and a pumping gear means 146A and a switching piston means, as element 122 is operably connected to element 120 and located within element 146, but fails to teach a third biasing means being located within a pumping gear means. It would have been obvious to one having ordinary skill in the art at the time the invention was

made to place a biasing means within a pumping gear in order to provide a more compact device for regulating a hydraulic pump pressure. It has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

10. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koch et al.

Koch discloses the claimed invention except that a conveying means comprising a rotating shaft means has uniform grooves, elements 126, 127 and 147, instead of helical grooves in the said shaft means. Khoo et al. 5,842,420 shows that rotating shaft 30 that conveys a fluid having helical grooves 68 was an equivalent structure known in the art. In order to rely on equivalence as a rationale supporting an obviousness-type rejection, the equivalency must be recognized in the prior art. *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958). Khoo represents evidence that rotating shafts conveying fluid having helical grooves within a shaft were art-recognized equivalent structures for a rotating shaft having uniform grooves.

Therefore, because these two shaft configurations were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute uniform grooves for helical grooves. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

11. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koch in view of Snoy 4,275,607. Koch teaches all the limitations as discussed but fails to teach the following limitation that is taught by Snoy for a device for pressure regulation of a hydraulic pump 80 comprising a filter 82 means arranged in series with a first surface of a piston member 85. It would have been obvious to one having ordinary skill in the art at the time the invention was

made to provide a filter in a pressure regulating device in order to ensure a constant fluid flow through a hydraulic circuit (Snoy- col. 4 ll. 3-8).

Response to Arguments

12. Applicant's arguments filed October 9, 2007 have been fully considered but they are not persuasive.

13. The rejections of claims 10-30 have been modified to reflect the changes made to claims 1, 19, and 25. The applicant argues that Koch does not teach or suggest a piston unit. The applicant argues that Koch does not teach a biasing force being applied to a surface of a piston. The applicant also argues that the objective of the instant invention is to reduce a pressure and quantity as a condition of operating characteristics, such as operating speed, of an engine.

In response to applicant's argument that Koch does not teach a piston, the examiner respectfully disagrees with applicant's assertion that a "plunger" cannot be interpreted as a piston. Koch teaches element 104 as plunger having at least one section (such as elements 106, 108, 110, or 114 which includes the surface defined by element 113) of an enlarged size in comparison to a connecting shaft section. The movement of "plunger" 104 causes a force to be applied to a volume of fluid within a chamber 147 and spring members 190 and 152. Therefore the plunger taught by Koch is effectively operating and has the form of a piston.

In response to applicant's argument that Koch does not teach a biasing force applied to a surface of a piston, the examiner respectfully disagrees. Each surface identified element 110, and 113, defines a surface area of a piston 104, as discussed above, that receives and delivers an applied force. The applicant has made reference to elements 125-127 of Koch and argued that these "points" are where a force is applied. The elements of Koch cited by the applicant are passages that permit a hydraulic fluid to flow in and out of a chamber (147 and 148) which

is then acted upon by or causes a piston to move by coming in contact with one of a surface area defined by elements 106, 108, and 110. Therefore a "surface" of a piston 104 receives a biasing force and anticipates the instant invention as discussed above.

In response to applicant's argument that the objective of the instant invention is to reduce a pressure and quantity as a condition of operating characteristics, such as operating speed, of an engine and is thus not taught by Koch, the examiner makes note of several points of relevance. It is noted that the features upon which applicant relies (i.e., oil pressure should be minimized as a function of predetermined operating values) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Further the Koch discloses the manipulation of oil pressure to affect the loading on an aircraft engine as a result of a steady state, over-speed, and under-speed condition of an engine in ¶0039-0041.

14. The examiner also makes note that in the office action of July 9, 2007 there was an error in items 8 and 9. In the sections identified it was stated that claims 25 and 26 were rejected under 35 U.S.C. 103(a), however the limitations of claims 26 and 28 were included and rejected in these section. Thus claims 26 and 28 were rejected in items 8 and 9 as part of the complete office action on the merits for the examination of claims 10-30 of the instant application.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

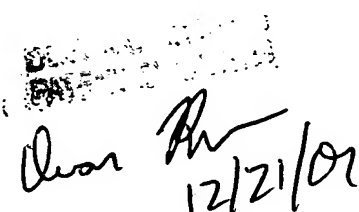
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard J. Weinstein whose telephone number is (571) 272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Karmer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


LJW


12/21/01